

Impacts of a Violence Prevention Program for Middle Schools

Findings After 3 Years of Implementation

Executive Summary

Impacts of a Violence Prevention Program for Middle Schools

Findings After 3 Years of Implementation

Executive Summary

May 2011

Authors

Suyapa Silvia
Jonathan Blitstein
Jason Williams
RTI International

Chris Ringwalt
Pacific Institute for Research and Evaluation (PIRE)

Linda Dusenbury
Collaborative for Academic, Social, and Emotional Learning (CASEL)
(formerly Tanglewood Research, Inc.)

William Hansen
Tanglewood Research, Inc.

Project Officer Name

John Rice
Institute of Education Sciences

U.S. Department of Education

Arne Duncan

Secretary

Institute of Education Sciences

John Q. Easton

Director

National Center for Education Evaluation and Regional Assistance

Rebecca Maynard

Commissioner

May 2011

This report was prepared for the National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, under contract no. ED01CO0052/0015 with RTI International, the Pacific Institute for Research and Evaluation (PIRE), and Tanglewood Research, Inc.

This report is in the public domain. Authorization to reproduce it in whole or in part is granted. While permission to reprint this publication is not necessary, the citation should read: Silvia, S., Blitstein, J., Williams, J., Ringwalt, C., Dusenbury, L., and Hansen, W. (2011). *Impacts of a Violence Prevention Program for Middle Schools: Findings After 3 Years of Implementation* (NCEE 2011-4017). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

IES evaluation reports present objective information on the conditions of implementation and impacts of the programs being evaluated. IES evaluation reports do not include conclusions, recommendations, or views with regard to actions policymakers or practitioners should take in light of the findings in the report.

To order copies of this report,

- Write to ED Pubs, Education Publications Center, U.S. Department of Education, P.O. Box 1398, Jessup, MD 20794-1398.
- Call in your request toll free to 1-877-4ED-Pubs. If 877 service is not yet available in your area, call 800-872-5327 (800-USA-LEARN). Those who use a telecommunications device for the deaf (TDD) or a teletypewriter (TTY) should call 800-437-0833.
- Fax your request to 301-470-1244 or order online at www.edpubs.org.

This report is also available on the IES website at <http://ncee.ed.gov>.

Alternate Formats

Upon request, this report is available in alternate formats, such as Braille, large print, audiotape, or computer diskette. For more information, call the Alternate Format Center at 202-205-8113.

This page intentionally left blank.

Acknowledgments

This study represents a collaborative effort among participating schools; staff from RTI International; our colleagues at Pacific Institute for Research and Evaluation (PIRE); researchers at Tanglewood Research, Inc.; and the program developers for Responding in Peaceful and Positive Ways (RiPP), Wendy Bauers Northup and Aleta Meyer, and the program developer for Best Behavior at the University of Oregon, Jeff Sprague. We are especially grateful to the school principals, faculty, and students of the participating schools for their dedication to implementing the programs and for graciously participating in all data collection.

At Tanglewood Research, Bill Hansen and Linda Dusenbury and a group of dedicated site liaisons supported, coached, and monitored teachers and faculty during the implementation of the programs; they also coordinated training and technical assistance for large numbers of staff. The program developers were true partners in this effort and were extremely flexible and cooperative with the needs of the study as we worked to implement an intervention formed from the two programs.

At RTI, the evaluation was supported by a team of devoted school recruiters, site coordinators, and site visitors, including Becky Durocher, Linda Bailey-Stone, Betty Burton, Terri Dempsey, Connie Hobbs, Farley Bernholz, Kimrey Millar, Lisa McCaskill, Elizabeth Parish, and Linda Pucci. The team oversaw locally based field data collectors who worked tirelessly to coordinate evaluation activities and achieve high response rates for the student survey. Data collection logistics and training were ably supported by Margaret Searle and Lori Hill, under the leadership of Lisa McCaskill and Linda Bailey-Stone. Jon Blitstein led the analyses; Jason Williams, Gordon Brown, and Kelly Close provided additional support. Terri Dempsey conducted qualitative analyses of interview data.

The study's Technical Working Group provided helpful advice and guidance on the second-year and third-year analyses. We appreciate the contributions of Thomas Cook, David Cordray, Daniel Flannery, Jeffrey Smith, and Pamela Orpinas.

This page intentionally left blank.

Disclosure of Potential Conflicts of Interest

The research team for this evaluation consists of a prime contractor, RTI International, and two subcontractors, Pacific Institute for Research and Evaluation (PIRE) and Tanglewood Research, Inc. RTI and PIRE formed the evaluation team, while Tanglewood Research oversaw implementation of the two programs. None of these organizations or their key staff members has financial interests that could be affected by findings from the evaluation of the two school-based violence prevention programs considered in this report. No one on the Technical Working Group, convened by the research team to provide advice and guidance, has financial interests that could be affected by findings from the evaluation.

This page intentionally left blank.

Executive Summary

This is the second and final report summarizing findings from an impact evaluation of a violence prevention intervention for middle schools. This report provides findings from the second and third years of the 3-year intervention. The U.S. Department of Education (ED) contracted with RTI International and its subcontractors, Pacific Institute for Research and Evaluation (PIRE) and Tanglewood Research, Inc., to conduct an evaluation of a hybrid intervention model that combines a curriculum-based program, Responding in Peaceful and Positive Ways (RiPP [Meyer and Northup 2002a, 2002b, 2006]), and a whole-school approach, Best Behavior (Sprague and Golly 2005). The combined intervention was administered over the course of 3 successive years. Using a randomized control trial design (with entire schools randomly assigned either to receive the intervention or not), the evaluation assessed the intervention's effects on both the full sample of students as well as on students at high risk for committing violence. Tanglewood Research provided implementation oversight along with site-based liaisons and coordinated training and technical assistance for staff in intervention schools. The developers of the two programs that constitute the intervention—Prevention Opportunities and University of Oregon—provided the program materials and conducted staff training. An earlier report presented findings after 1 year of program implementation (Silvia et al. 2010).

Study Background

ED's Office of Safe and Drug-Free Schools (OSDFS) administers a variety of state and national programs under the Safe and Drug-Free Schools and Communities Act (SDFSCA, Title IV-A) that are focused on efforts to develop and maintain safe, disciplined, and drug-free schools. Drug and violence prevention activities under these programs are carried out in elementary and secondary schools, as well as in institutions of higher education. While there is now a lengthy set of school-based drug prevention curricula that have been evaluated using rigorous designs, much less evidence is available concerning effective violence prevention strategies in school settings.

The need for evidence-based violence prevention programs is particularly critical for middle schools, whose students experience the highest rate of school-based violence relative to students in other grades. The most recent data available from the National Crime Victimization Survey show that in the 2006–07 school year, 4.3 percent of students aged 12 through 18 reported that they had been victims of a crime at school (DeVoe, Bauer, and Hill 2010). Data also indicate that the rate of victimization in 2007 for nonfatal violent crimes at school for students aged 12 through 14 was 67 incidents per 1,000 students, compared with the rate for students aged 15 through 18, which was 49 incidents per 1,000 students (Dinkes, Kemp, and Baum 2009). Students were also more likely to experience a violent event in middle schools (41 per 1,000) than in elementary (26 per 1,000) or secondary (22 per 1,000) schools. Data also indicate that bullying is a significant problem. In the 2007–08 school year, 44 percent of middle schools, compared with 21 percent of primary schools and 22 percent of high schools, reported weekly or more frequent incidents of bullying (Dinkes, Kemp, and Baum 2009).

Violence prevention strategies in schools can be divided into two broad types: curriculum-based programs and whole-school (or environmental) strategies. Curriculum-based programs are implemented in a classroom setting and typically aim to improve students' social and problem-solving skills for dealing with conflict and managing violence. Whole-school (or environmental) approaches seek to influence the school environment through a variety of strategies, such as

increasing supervision of the school grounds, clarifying rules and consequences for student behavior, establishing reward systems to encourage positive behaviors, and training staff in classroom management.

While evaluations of curriculum programs have yielded statistically significant results, their effect sizes are modest. A meta-analysis of school-based violence prevention evaluations from a mix of experimental and quasi-experimental designs reported an average effect size of 0.10 (Cohen's *d*) for classroom-based social skills programs (Wilson and Lipsey 2005). RiPP (Meyer and Northup 2002a, 2002b, 2006) is an example of such a curriculum and is one of two prevention programs selected for this study. RiPP has been subjected to three discrete evaluations by the program's developers. One of these compared one classroom receiving RiPP to a nonmatched comparison classroom in the same school. In the second study, eight schools self-selected either to implement RiPP or be in the control condition. The third study used an experimental design. The two nonexperimental studies found that students who were exposed to RiPP reported significantly less physical aggression and lower levels of peer provocation than students in the comparison group but reported no significant differences in nonphysical aggression or drug use. Findings regarding self-reported delinquent behaviors were mixed (Farrell, Valois, and Meyer 2002; Farrell, Valois et al. 2003).

The single experimental evaluation of RiPP took place in 27 classes of 6th-graders in three urban middle schools. The evaluation found that after 1 year of exposure to RiPP, students reported fewer serious fight-related injuries and more participation in peer mediation compared with students in the control group but no difference on weapons-related violence or threats to teachers. School records showed fewer in-school suspensions and disciplinary violations for violent offenses for the students exposed to RiPP but no differences in out-of-school suspensions. The statistically significant outcomes were not maintained either 6 months or 1 year later (Farrell, Meyer, and White 2001). In addition, intervention classrooms in two of the study schools were subsequently randomized either to receive an additional year of RiPP or not to receive an additional year. In this case, based on school records, there were fewer violent offenses for the RiPP group 1 year after the treatment group received 2 years of RiPP and the control group received 1 year of RiPP (Farrell, Meyer et al. 2003).

A few school-based programs have sought to prevent violence by means of a whole-school approach such as the schoolwide Positive Behavior Support (PBS) approach (Sugai and Horner 1994; Sprague, Sugai, and Walker 1998) and the whole-school component of Positive Behavioral Interventions and Supports (PBIS). Three evaluations of the whole-school approach examined changes in student outcomes without using any comparison group (Barrett, Bradshaw, and Lewis-Palmer 2008; Bradshaw, Mitchell, and Leaf 2010; Metzler et al. 2001), and a fourth used an experimental design in 63 elementary schools. The investigators from the latter study reported that the program led to an improvement in school staff members' perceptions of school safety and an increase in the proportion of 3rd-graders meeting state reading assessment standards (Horner et al. 2009). In addition, two evaluations have examined student outcomes after combining characteristics of both whole-school and curriculum-based approaches. One of these evaluations studied the approach using nonmatched, comparison schools (Sprague et al. 2001), and the other evaluation used an experimental design with a sample of eight schools (Orpinas et al. 2000). Neither study reported statistically significant differences on the targeted behavioral outcomes.

The study's research questions for impacts and implementation are provided in table ES-1.

Table ES-1. Research questions

Intervention implementation
<ul style="list-style-type: none"> • Is delivery of the violence prevention program consistent with its design and intended implementation? • What are the average costs of the program for participating schools and students?
Student outcomes and impacts
<ul style="list-style-type: none"> • Are there differences in the degree of violence and victimization in schools that implement the violence prevention program, relative to schools that do not implement it? • What is the impact of the violence prevention program on students who are at elevated risk for violence? • What are the outcomes of the violence prevention program for students with maximum program exposure or dosage?

The Intervention

Two research-based programs were selected through an open competition and advice from a panel of experts in the field of violence prevention: the RiPP program (Meyer and Northup 2002a, 2002b, 2006) was chosen as the curriculum-based component of the intervention, and the Best Behavior program (Sprague and Golly 2005) (a formalized version of schoolwide PBS [Sugai and Horner 1994; Sprague, Sugai, and Walker 1998]) was selected as the whole-school component. These two approaches are considered complementary in that they target both individual- and school-level change mechanisms. RiPP is similar to other social skills programs in that it aims to increase social competence and improve problem-solving skills to reduce violence. While whole-school programs such as Best Behavior typically feature a schoolwide committee to review rules and policies for student behavior, Best Behavior (and PBS, upon which it is based) also includes a reward system to reinforce appropriate behavior.

RiPP and Best Behavior were rated the highest by outside expert reviewers among a set of 16 curricular and whole-school programs submitted for consideration by program developers of middle school violence prevention programs. Criteria for program selection included the program's developmental appropriateness, overall quality of the approach and potential for reducing violence, theoretical foundation, and any outcome or process evaluation results, if available. The design of the intervention as a hybrid of the two types of programs was based on recommendations presented by a group of technical advisors in a design paper commissioned by ED prior to the current study (Bos, Weinstock, and Frankenberg 2004). The group's recommendations were the result of discussions held during a series of technical working group meetings and were informed by several literature reviews and commissioned papers on the subject. Experts concluded that a combination of the two broad types of violence prevention strategies—curricular and whole-school approaches—offered the strongest potential for impacts. This conclusion was based on the experts' judgment that the effect size was likely to be low for any one program, particularly a universal curriculum program, and that a whole-school strategy might boost that effect.

While both RiPP and Best Behavior are implemented by school staff, in this study technical assistance was made available throughout the implementation period by on-site implementation liaisons trained and hired by the implementation subcontractor, Tanglewood Research. Liaisons (e.g., former school teachers or administrators) were hired to facilitate, coach, and monitor the progress and delivery of both programs.

The Curriculum: RiPP Program

RiPP (Meyer and Northup 2002a, 2002b, 2006) is a universal, social-cognitive violence prevention program that focuses on the reduction of situational and relationship violence. The goal of the curriculum is to promote effective social-cognitive problem-solving skills; motivation and self-efficacy for using those skills; and school norms that support those attitudes and skills while reducing the appeal and perceived utility of violent behaviors and related attitudes. By targeting these attitudes and skills, the program is designed to increase social competence and thereby reduce violent behavior.

The RiPP curriculum consists of 16 lessons (each lasting 50 minutes) per year in grades 6 through 8. Each lesson builds on the previous lessons in a cumulative fashion. Similarly, each grade-level curriculum expands on the concepts taught in the previous year. In year one of program implementation, all students in the 6th through 8th grades received lessons designed for use in 6th grade (RiPP-6) because all students were required to receive the foundational lessons before the more advanced RiPP materials. In the second year of program implementation, 6th-graders received the RiPP first-year curriculum, while the 7th- and 8th-graders both received the RiPP second-year curriculum. In the third year of the project, each grade received its grade-specific curriculum. Thus, by the end of the 3-year project, the study sample (6th-graders in the first year of the project) received all 3 years of the curriculum.

The lessons in the RiPP program introduce and then reinforce the problem-solving model. The lessons comprise a variety of activities and strategies, including team building, social-cognitive problem solving, repetition and mental rehearsal, small group work, role playing, rehearsal of specific social skills for preventing violence, and didactic learning. Most lessons contain between four and six of these activities and are estimated to take between 5 minutes and 15 minutes per activity. Each activity is scripted and tied to a specific objective. Most lessons make use of the student workbook as part of the activities.

The Whole-School Intervention: Best Behavior Program

Best Behavior (Sprague and Golly 2005) provides a standardized staff development program that is designed to develop and administer effective school rules and discipline policies at both schoolwide and classroom levels to decrease school violence and antisocial behavior. The complete Best Behavior program is designed to be implemented on an approximately 3-year timeline, as individual school capacity dictates. The program is implemented by a school management team made up of teachers and administrators. Best Behavior involves intervention strategies at the school and classroom levels, including the following:

- review and refinement of school discipline policies;
- use of positive reinforcement and recognition for prosocial behaviors, both schoolwide and in individual classrooms;
- clarification and teaching of behavioral expectations for student behaviors; and
- systematic collection and review of patterns of discipline referrals to guide decisionmaking and planning.

The Best Behavior management team is expected to create a systematic approach to developing schoolwide positive behavior supports. This approach includes four broad sets of activities, the first three of which should be implemented beginning in the first year. First, the team

is to conduct a schoolwide needs assessment to identify reasonable goals. Needs assessments are to be repeated annually. Second, the team is to define rules and expectations, with general rules (e.g., be safe, be respectful, be responsible) supported with expectations for all settings within the school environment. Rules and expectations are to be taught on a regular basis by all teachers and staff. Third, the team is to develop and support a positive behavior reinforcement system in which students are to be given token rewards for obeying rules and meeting expectations. Finally, in the second year of program implementation, the team is to develop a data-based decisionmaking process for identifying and addressing the needs of high-risk students.

During annual training, Best Behavior prompts each school to develop its own specific strategies for achieving goals and objectives for each year while specifying the particular components that schools must implement. Best Behavior provides training on typical program implementation to enable each team to implement the various components specific to the needs of its individual school. For example, a sample lesson plan for teaching “be respectful” is provided, but teams are encouraged to adapt this prototype lesson to fit the language and unique cultural features of their school. As another example, all schools develop a reinforcement system, but the nature of the reinforcement system varies across schools (e.g., pizza parties vs. field trips). Therefore, while all schools implement each component of the program, the specific nature of the activities varies by school.

Best Behavior was adapted to reinforce and complement the RiPP curriculum. As part of the integration with RiPP, Best Behavior recommended that a RiPP teacher be included on the school management team. In addition, Best Behavior trainings included a review of RiPP concepts and encouraged team members to think about ways of reinforcing these concepts schoolwide. RiPP lessons also reinforced Best Behavior concepts, such as the school rules.

Evaluation Design

The study was designed as a group-randomized control experiment in 40 middle schools serving grades 6 through 8. Twenty schools were randomly assigned to receive the combined intervention, and 20 schools were randomly assigned to serve as control schools (with no intervention beyond that which schools were already implementing). The intervention was delivered schoolwide by school staff trained annually by the program developers. Best Behavior was implemented by school management teams formed at each school, while RiPP was delivered by teachers in specific classes (e.g., science, social studies). School staff also received technical assistance and were monitored throughout implementation by trained site liaisons under the guidance of Tanglewood Research.

The study was designed to estimate the impact of the RiPP and Best Behavior programs relative to what is being offered in the control schools. Most schools have ongoing violence prevention activities; therefore, the study compared the combined Best Behavior and RiPP intervention to extant school programs or the status quo. Schools that were implementing the Best Behavior or RiPP intervention (or a few other very similar programs listed on national registries as exemplary or model programs) prior to the study were excluded.

Participating Schools

Following recruitment of 13 districts and 40 schools, random assignment to condition was conducted within district, among pair-matched sets of schools based on the percentage of students receiving free or reduced-price lunches. The sites were geographically dispersed and represented a

range of district enrollment sizes. A majority of the districts were located in large urban or suburban areas with only three sites in rural districts. All participating schools were middle schools that included only grades 6 through 8. The average enrollment in these schools was 871 students and ranged between 462 students and 1,404 students. Minority students composed 65 percent of the student body, on average, and ranged between 15 percent and 100 percent. The average percentage of students receiving free or reduced-price lunches was 56 percent and ranged between 16 percent and 97 percent. There were no statistical differences between the intervention and control groups on these characteristics. Thirty-six schools (18 matched pairs) completed all 3 years of the project. For both pairs that did not complete all 3 years of the project, the control school was dropped from the study as a result of its paired intervention school ending its participation. The analytic sample for this report is comprised of data from these remaining 36 schools.

Student Sample

The analysis that estimated impacts after 3 years of the program used data from the full 8th-grade student body, including those who entered the study schools as 6th-graders or 7th-graders and remained as 8th-graders and those who were new in spring 2009 (third follow-up). Nineteen percent of the students in the third follow-up sample were not in the original sample at baseline, while 81 percent were in both samples. These data were used to answer questions about the effects of the intervention across the general student population after 3 years of program implementation. Sixty-one percent (5,854) of students enrolled in the study schools completed a survey at the third follow-up that provided data for the impact analysis after 3 years of the program. Student demographic characteristics at baseline for the 36 schools that participated for all 3 years of program delivery indicate that minority students composed 72 percent of the sample in intervention schools and 61 percent of the sample in control schools. Forty-nine percent of the students in each group were male, and 60 percent in each group lived in single-adult households. A two-tailed *t*-test, obtained from multilevel regression models using the school as the unit of analysis, indicated that none of the mean demographic characteristics was statistically different between students attending intervention schools and those attending control schools.

To address the research question regarding how the program impacts students at high risk for violent behaviors, we identified a subset of students at high risk for violent and aggressive behaviors, based on student responses to the fall 2006 baseline survey. Student self-report was considered critical for this study because many of the behaviors of concern often take place outside of the classroom and may not be reported to the school administrators. In addition, students have the best knowledge of their own behaviors and experiences. On the other hand, some students may hesitate to disclose information about their own behaviors, especially if they have concerns about the confidentiality of the data. The survey administration procedures used in this study were designed to make students comfortable with providing self-report data (see details in the “Data Collection and Outcome Measures” section below). A large study of the test-retest reliability of the Youth Risk Behavior Survey, which asks students about numerous risky behaviors, found that three of eight violence and victimization items had at least “substantial” reliability (kappa statistic ≥ 61 percent) and that five had at least “moderate” reliability (kappa statistic ≥ 41 percent) (Brener et al. 2002).

The high-risk sample was divided into two subgroups. *High-risk perpetrators* were defined as students who had self-reported perpetration of any one of eight serious acts of violence at school at

least once in the past 30 days.¹ Approximately 25 percent of the total treatment and control group sample, or 1,923 students, were assigned to the high-risk perpetrator group at baseline. *High-risk nonperpetrators* were defined as students who self-reported endorsing violence or reacting inappropriately to anger but who did not self-report any of eight serious acts of violence. Approximately 3 percent of the total treatment and control group sample, or 230 students, were assigned to the high-risk nonperpetrator group.

Unlike the remainder of the students in the full sample, the high-risk samples were to be followed longitudinally; the research team attempted to survey the students in the high-risk subgroups even if they left one of the study schools and were attending another school in the same district at each follow-up. If a student went to a different district, the student was not followed. Seventy-one percent of the students identified as high risk at baseline in the 36 schools that participated for 3 years completed a survey at the third follow-up ($N = 1,357$).

Teacher Sample

Secondary outcome data were collected from teachers through an annual survey conducted in spring. This survey was administered to a random sample of 24 teachers (stratified by grade) at each of the intervention and control schools participating in the study; a new sample was selected each year. Eligible teachers included all full-time classroom teachers and could include RiPP teachers who delivered the curriculum in intervention schools.² Ninety-eight percent ($N = 854$) of the sampled teachers completed a survey in the third year. Among responding teachers in intervention schools, 30 percent were RiPP teachers.

Data Collection and Outcome Measures

Data for the study's outcome measures to estimate intervention impacts were collected through student surveys in both intervention and control schools. Student surveys provided data to address the main impact research questions regarding school violence. Peer nomination measures by which data about individual students are simultaneously collected from many different peers were not considered due to the time-consuming and impractical nature of this type of collection within the context of a large multiyear effort. For this report, the baseline data collection for students occurred in fall 2006, and the follow-up to estimate impacts after 3 years occurred in spring 2009. Teacher data were collected through a survey administered to a random sample of 24 full-time teachers at each school in spring of each year to assess other program impacts besides main outcomes (school climate, victimization, feelings of safety). In addition to outcome data, the study team collected implementation data through the teacher survey, class records, annual school prevention coordinator and teacher interviews, and classroom observations. Annual interviews were conducted with the following: one person at each intervention and control school with the most knowledge about existing violence prevention activities, three randomly selected RiPP teachers at each intervention school to ask about teachers' experiences with teaching RiPP, and three randomly selected members of the school management team at each intervention school to ask about their experiences with implementing Best Behavior. Finally, observations of RiPP sessions were

¹ The eight serious acts of violence were: (1) pick a fight with another student; (2) hurt another by hitting, pushing, slapping, or shoving; (3) throw something at another student to hurt them; (4) take, damage, or destroy someone else's belongings; (5) try to force another student to do something they did not want to do; (6) threaten another student with a weapon such as a knife, gun, or club; (7) bring a weapon such as a knife, gun, or club to school; and (8) injure another student with a weapon such as a knife, gun, or club.

² Schools identified a subject or subjects, such as health or social studies, through which RiPP could be delivered to all 6th-graders through 8th-graders. Teachers in those subjects were designated as RiPP teachers and trained to deliver the curriculum.

conducted by the evaluation team in three randomly selected classrooms (one classroom per grade level) in each intervention school.

Student survey administration procedures were designed to address potential issues with reliability of self-report data on topics of a sensitive nature, such as violence and victimization. To safeguard the confidentiality of the students' data and encourage candid responses from students, the following measures were used: (1) prior to beginning the survey, students were read standard instructions to advise them how the survey should be completed and how the data would be used and safeguarded; (2) students were advised that the survey was voluntary and that they could skip any questions they did not wish to answer; (3) students responded to the survey by filling in circles for each item, so no handwritten responses by which students might be identified were required; (4) special labels with peel-away portions left only a bar code and no name on the survey booklets; (5) members of the evaluation team administered the survey, and no school staff were allowed to circulate among the students while the survey was in progress; (6) seating was arranged so that students had an empty seat between them, when possible; and (7) completed surveys were placed in large envelopes that were then sealed and taken from the school by the evaluation team.

The primary outcomes are student violence and student victimization, both measured through student surveys. For each of these two outcomes, two additional subindices were created to better understand any differences between intervention and control schools with regard to specific types of violence. A second set of indices was created to examine possible secondary effects from the intervention, beyond the primary effects. These were: (1) student safety concerns; (2) teacher safety concerns; (3) teacher victimization; and (4) student prosocial behaviors. Finally, a third set of indices was created to examine possible intermediate effects from the intervention. The theoretical model for the combined intervention predicts that changes in these areas would precede changes on the primary outcomes and included: (1) student perceptions of behavior expectations; (2) student attitudes toward violence; and (3) student self-reported coping strategies.

Analytic Approach for Estimating Program Impacts

The study team evaluated program impacts using multiple regression models that predicted each outcome's measure (e.g., violence, victimization) as a function of condition (intervention vs. control) and relevant covariates (e.g., demographic characteristics, school characteristics) using a mixed-effects regression model based on multilevel equations. Primary outcomes include self-reported counts of violent behavior and victimization occurring in the past 30 days.

The full student sample and gender subgroup analyses used a matched nested cross-sectional model (matched analysis). Under this model, students are nested in schools; schools are nested in pairs *and* in experimental condition; and pairs are crossed with experimental condition (i.e., each pair is represented at each level of condition). The covariate models for students in the full sample predicted the average response at follow-up, adjusting for the following covariates: baseline school mean of the response, school size, and individual demographic variables (gender, race/ethnicity, and number of parents in the household). For the gender subgroup analyses, the adjusted models included a gender-by-condition interaction effect.

The statistical models employed to assess program outcomes among high-risk youth are different from those employed to assess program outcomes on the general population of students. For the high-risk youth, the interest is in whether or not the RiPP and Best Behavior intervention led to individual change across time. To address this question, nested cohort models using difference-in-difference estimation were developed to assess changes on self-reported measures of

aggression and victimization among high-risk youth in intervention schools relative to changes among high-risk youth in control schools, for both subpopulations of high-risk, nonperpetrator students and high-risk, perpetrator students. These models use data collected on the same sample of students at each measurement occasion. The repeated measures models for the high-risk subsamples contained the student's treatment condition (intervention vs. control), data collection wave, wave-by-condition interaction effect, gender, race/ethnicity, number of parents in household, and school size. Estimated program impacts reflect the net difference of the within-group change from pretest to third follow-up for intervention versus controls.

To examine teacher outcomes, we employed multivariate models where teachers are nested within schools and schools are nested within matched pairs randomized to experimental condition. Hierarchical linear models account for the correlation of teachers within schools and for schools within matched pairs assigned to condition. The models predicted the average response at follow-up, adjusting for school size.

Implementation Findings

The key descriptive findings regarding implementation of the curriculum portion of the program across all years include the following:

- **In a majority of intervention schools, students were exposed to the full set of 16 RiPP lessons in each of the 3 years of implementation.** Between 61 percent and 72 percent of schools delivered all 16 lessons to all classrooms in each year of program implementation, while another 17 percent to 22 percent of schools delivered all lessons in at least three-fourths of these classrooms.
- **The curriculum was not fully delivered with fidelity.** In year three, teachers in 44 percent of the intervention schools were observed to deliver lessons with few or no deviations from the written lesson plan (e.g., adding or modifying activities or changing the activity sequence), according to classroom observations by the evaluation team. With regard to teachers delivering lessons with few or no deviations from the prescribed teaching strategies (e.g., using role plays or small group discussions), teachers met this second criterion in 56 percent of schools in the third year.
- **Interviewed RiPP teachers cited challenges with using one or more of the prescribed teaching techniques or approaches.³** Eighty-eight percent of teachers interviewed in year three mentioned difficulties with implementing at least one of five RiPP techniques or approaches, and 27 percent mentioned difficulties with implementing three or more of the five techniques or approaches.
- **The extent to which students were engaged with the curriculum declined by year three.** The evaluation team observed the same cohort of students receiving the curriculum over 3 successive years. These students were found to be engaged during the lesson activities, exercises, and discussions in 89 percent of the intervention schools in year one and 69 percent in year three.

³ RiPP teachers were to use the following teaching techniques and approaches: make RiPP real (tie it to students' daily lives); role plays; small group work, discussion, and brainstorming; encourage self-talk by students; use *Review* and *Closure* to begin and end sessions.

The key descriptive findings regarding the implementation of the whole-school portion of the program across the 3 years include the following:

- **Principal support and commitment for the whole-school portion of the intervention was mixed in year three.** Principals at 72 percent of the intervention schools were rated as supportive in year three, according to liaisons who helped implement the program. In addition, liaisons reported that 50 percent of the principals in year three used their leadership to promote the program. In the third year of implementation, slightly more than half (56 percent) of the principals were regularly involved with the school management team.
- **By the end of the third year, the majority of intervention schools had instituted behavioral rules and rewards. In addition, a majority of teachers agreed that the rules were well defined and clear with regard to the behaviors being targeted.** By the end of the third year, 83 percent of intervention schools had developed and posted school rules in the school, 78 percent had developed and instituted a token reward system for adhering to school rules, and 78 percent had developed lesson plans and taught the school rules in classrooms. In addition, 87 percent of teachers at intervention schools agreed or strongly agreed that school rules were clearly defined. However, a smaller percentage (64 percent) of the teachers surveyed in year three agreed or strongly agreed that it was clear what consequences would follow when school rules were broken.
- **Among the cited challenges with implementing Best Behavior were finding time to implement the program, obtaining teacher buy-in, maintaining student interest, and funding the rewards program.** School management team members interviewed in year three mentioned difficulties with finding the time to implement the program.⁴ Others talked about issues with low teacher buy-in, a lack of student interest in the rewards offered through the reward system, and continued problems with funding the reward system.
- **By design, no control school implemented RiPP or Best Behavior during the 3 years of the study.** However, there were various violence prevention activities already in place in the participating schools. Between eight schools and nine schools in the intervention group and between six schools and seven schools in the control group administered classroom-based education other than RiPP across the 3 years. The types of programs implemented included gang resistance programs, character education programs, and individual presentations that were not part of a curriculum (most often, speakers, a video, or a lesson) focused on specific topics such as bullying, harassment, and dating violence.

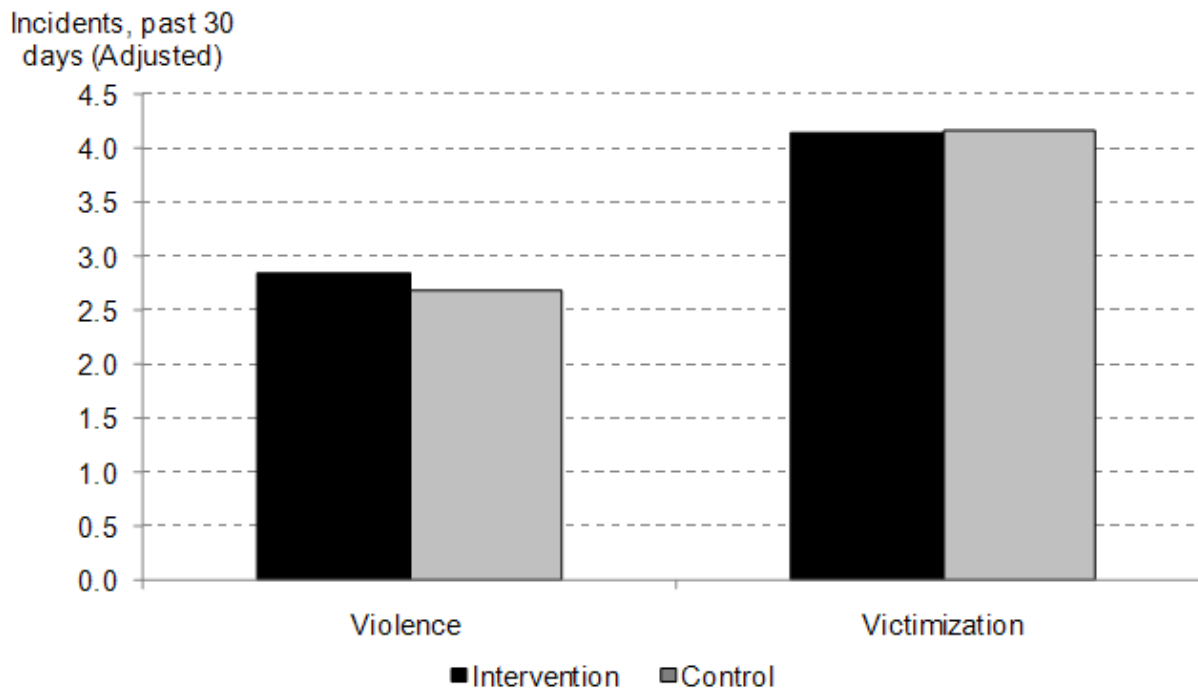
⁴ Key program practices are as follows: (1) the school management team meets regularly; (2) rules of behavior are defined and adopted; (3) rules are posted throughout the school; (4) plans are developed for teaching rules; (5) rules and expectations are taught; (6) a reinforcement system is developed; (7) the reinforcement system is implemented school-wide; (8) discipline data are collected and reviewed; (9) focus is given to the needs of high-risk youth; and (10) a schoolwide needs assessment is conducted periodically.

Impact Findings

These are the main findings regarding intervention impacts after 3 years.

- **There were no statistically significant differences between intervention and control schools on self-reported student violence or victimization (figure ES-1).** On average, 8th-graders in the intervention schools reported engaging in 2.84 violent acts at school in the past 30 days, compared with 8th-graders in control schools, who reported engaging in 2.69 violent acts at school in the past 30 days. On average, 8th-graders in intervention schools reported being victimized 4.14 times in the past 30 days, while 8th-graders in control schools reported being victimized 4.16 times in the past 30 days.
- **There were no statistically significant program impacts on violence or victimization for students who were at risk for engaging in violence but who had not previously done so (figure ES-2).** On average, 8th-graders in the intervention schools who were categorized as being at a high risk for violence but who had not self-reported any of eight serious acts of violence ever at baseline (nonperpetrators) reported at the third-year follow-up that they had engaged in 3.30 (change from baseline of 1.28) violent acts at school in the past 30 days. This is compared with high-risk, nonperpetrator 8th-graders in the control schools who reported at the third follow-up that they had engaged in 3.12 (change from baseline of 1.35) violent acts at school in the past 30 days. In addition, high-risk, nonperpetrator 8th-graders in the intervention schools reported being victimized an average of 4.30 (change from baseline of 3.60) times at school in the past 30 days. This is compared with high-risk, nonperpetrator 8th-graders in the control schools who reported being victimized an average of 3.79 (change from baseline of 3.41) times at school in the past 30 days.
- **There were no statistically significant program impacts on violence or victimization for high-risk students who had previously engaged in violence (figure ES-3).** On average, high-risk, perpetrator 8th-graders in the intervention schools reported at the third follow-up that they had engaged in 3.95 (change from baseline of 5.36) violent acts at school in the past 30 days. This is compared with high-risk, perpetrator 8th-graders in the control schools who reported at the third follow-up that they had engaged in 3.90 (change from baseline of 4.92) violent acts at school in the past 30 days. Those in intervention schools reported being victimized 4.90 times at school in the past 30 days, on average (change from baseline of 6.29), while those in control schools reported an average victimization rate of 5.05 (change from baseline of 6.10).
- **There were no statistically significant impacts on either secondary or intermediate outcomes.** In addition, after 3 years of exposure to the RiPP and Best Behavior intervention, student measures for secondary outcomes—including student safety concerns, teacher victimization and safety concerns, and student prosocial behaviors—did not differ between students in intervention schools and students in control schools. Also, there were no statistically significant differences on intermediate outcomes—that is, where the program logic model predicts change would be observed before it would be observed on the outcome measures. These include student self-reported coping strategies, student perceptions of behavior expectations, and student attitudes toward violence.

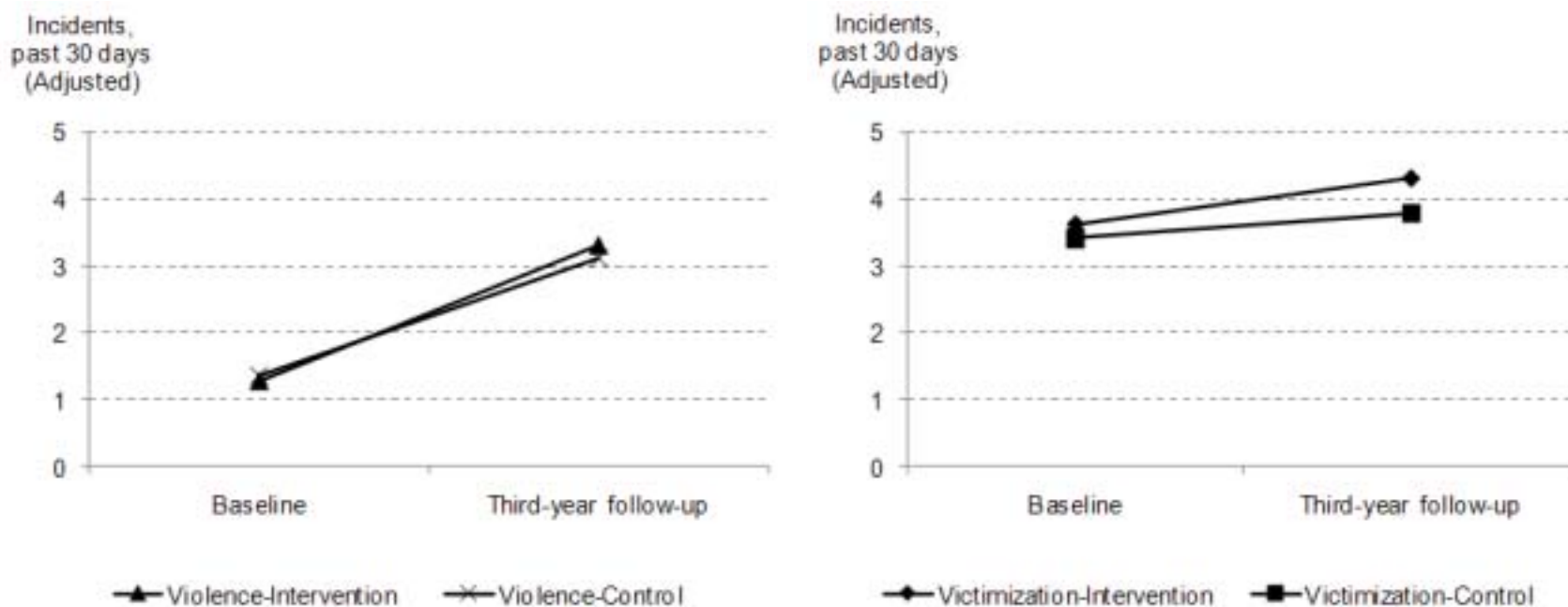
Figure ES-1. Main program impacts on self-reported violence and victimization, after 3 years of program delivery



NOTE: $N = 2,784$ students clustered in 18 intervention schools and 3,070 students clustered in 18 control schools. Generalized linear mixed models (SAS PROC GLIMMIX, Poisson distribution with log link function) were used to evaluate the program impact while accounting for the clustering of students within schools. Covariates in the model included the baseline school mean of the response variable, treatment condition (intervention vs. control), race/ethnicity, sex, number of parents in household, and school size. Program impacts were estimated as a model-adjusted event rate ratio (ERR) for intervention versus controls at follow-up, with 95 percent confidence limits. There are no statistically significant program impacts.

SOURCE: Student survey, fall 2006 (baseline) and spring 2009 (third follow-up).

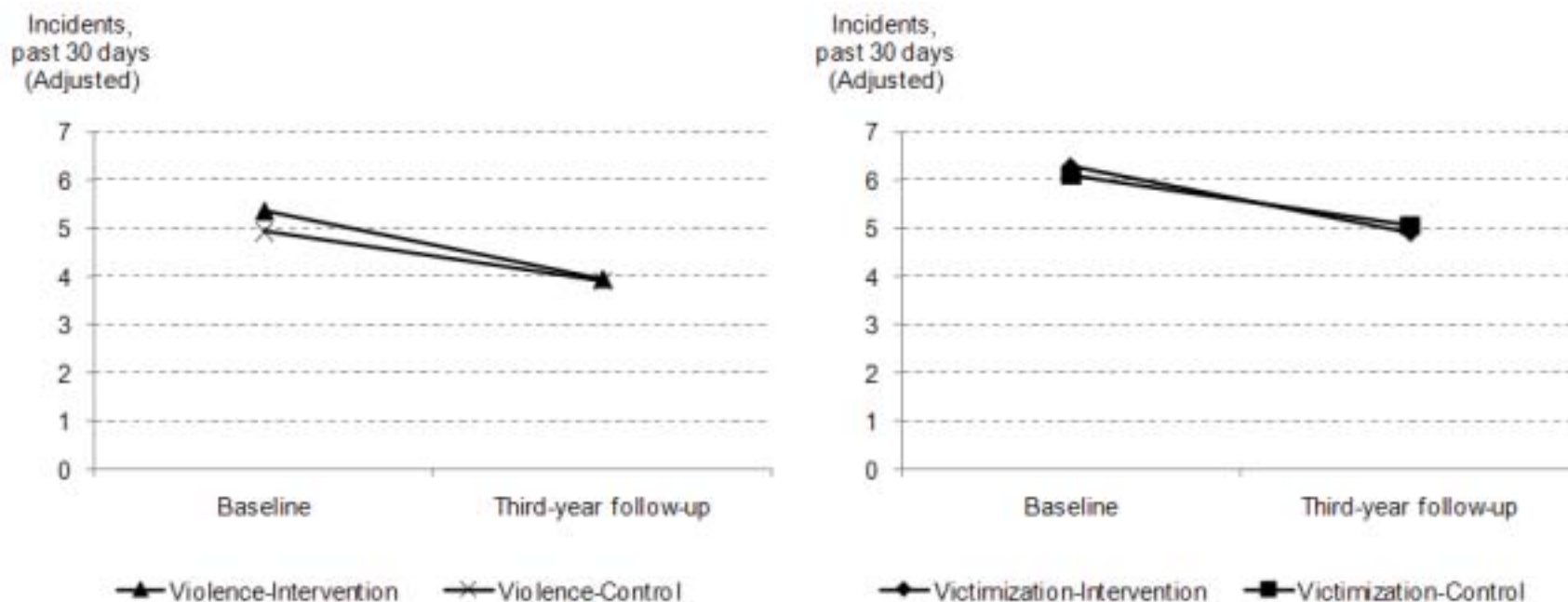
Figure ES-2. Main program impacts on self-reported violence and victimization, after 3 years of program delivery: High-risk, nonperpetrator subgroup (Via repeated measures)



NOTE: $N = 70$ students clustered in 18 intervention schools and 74 students clustered in 18 control schools. Generalized linear mixed models (SAS PROC GLIMMIX, Poisson distribution with log link function) were used to evaluate the program impact while accounting for the clustering of students within schools. Covariates in the model included gender, race/ethnicity, number of parents in household, and school size. Program impacts (with 95 percent confidence limits) were estimated via difference-in-difference models comparing change across time in the intervention versus control group. There are no statistically significant program impacts.

SOURCE: Student surveys limited to a high-risk subgroup of 6th-graders surveyed in fall 2006 and followed up in spring 2009.

Figure ES-3. Main program impacts on self-reported violence and victimization, after 3 years of program delivery: High-risk, perpetrator subgroup (Via repeated measures)



NOTE: $N = 552$ students clustered in 18 intervention schools and 661 students clustered in 18 control schools. Generalized linear mixed models (SAS PROC GLIMMIX, Poisson distribution with log link function) were used to evaluate the program impact while accounting for the clustering of students within schools. Covariates in the model included gender, race/ethnicity, number of parents in household, and school size. Program impacts (with 95 percent confidence limits) were estimated via difference-in-difference models comparing change across time in the intervention versus control group. There are no statistically significant program impacts.

SOURCE: Student surveys limited to a high-risk subgroup of 6th-graders surveyed in fall 2006 and followed up in spring 2009.

References

- Barrett, S., Bradshaw, C., and Lewis-Palmer, T. (2008). Maryland Statewide PBIS Initiative: Systems, Evaluation, and Next Steps. *Journal of Positive Behavior Interventions*, 10: 105–114.
- Bos, H., Weinstock, P., and Frankenberg, A. (2004). *Design Considerations for a National Evaluation of a School-Based Violence Prevention Program*. Oakland, CA: Berkeley Policy Associates for U.S. Department of Education.
- Bradshaw, C., Mitchell, M., and Leaf, P. (2010). Examining the Effects of Schoolwide Positive Behavioral Interventions and Supports on Student Outcomes. *Journal of Positive Behavior Interventions*, 12: 133–148.
- Brener, N.D., Kann, L., McManus, T., Kinchen, S., Sundberg, E., and Ross, J. (2002). Reliability of the 1999 Youth Risk Behavior Survey Questionnaire. *Journal of Adolescent Health*, 31: 336–342.
- DeVoe, J.F., Bauer, L., and Hill, M.R. (2010). *Student Victimization in U.S. Schools: Results From the 2007 School Crime Supplement to the National Crime Victimization Survey* (NCES 2010-319). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Dinkes, R., Kemp, J., and Baum, K. (2009). *Indicators of School Crime and Safety: 2009* (NCES 2010-012/NCJ 228478). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice. Washington, DC.
- Farrell, A.D., Meyer, A.L., and White, K.S. (2001). Evaluation of Responding in Peaceful and Positive Ways (RiPP): A School-Based Prevention Program for Reducing Violence Among Urban Adolescents. *Journal of Clinical Child Psychology*, 30: 451–463.
- Farrell, A., Valois, R., and Meyer, A. (2002). Evaluation of the RiPP-6 Violence Prevention Program at a Rural Middle School. *American Journal of Health Education*, 33(3): 167–172.
- Farrell, A.D., Valois, R.F., Meyer, A.L., and Tidwell, R.P. (2003). Impact of the RiPP Violence Prevention Program on Rural Middle School Students. *Journal of Primary Prevention*, 24(2): 143–167.
- Horner, R., Sugai, G., Smolkowski, K., Eber, L., Nakasato, J., Todd, A., and Esperanza, J. (2009). A Randomized, Wait-List Controlled Effectiveness Trial Assessing School-Wide Positive Behavior Support in Elementary Schools. *Journal of Positive Behavior Interventions*, 11: 133–144.
- Metzler, C., Biglan, A., Rusby, J., and Sprague, J. (2001). Evaluation of a Comprehensive Behavior Management Program to Improve School-Wide Positive Behavior Support. *Education and Treatment of Children*, 24: 448–479.
- Meyer, A.L., and Northup, W. (2002a). *RiPP: A Violence Prevention Curriculum for the Seventh Grade*. Ashland, VA: Authors.

References

- Meyer, A.L., and Northup, W. (2002b). *RiPP: A Violence Prevention Curriculum for the Sixth Grade*. Ashland, VA: Authors.
- Meyer, A.L., and Northup, W. (2006). *RiPP: A Violence Prevention Curriculum for the Eighth Grade*. Ashland, VA: Authors.
- Orpinas, P., Kelder, S., Frankowski, R., Murray, N., Zhang, Q., and McAlister, A. (2000). Outcome Evaluation of a Multi-Component Violence-Prevention Program for Middle Schools: The Students for Peace Project. *Health Education Research*, 15: 45–58.
- Silvia, S., Blitstein, J., Williams, Ringwalt, C., Dusenbury, L., and Hansen, W.B. (2010). *Impacts of a Violence Prevention Program for Middle Schools: Findings From the First Year of Implementation* (NCEE 2010-4007). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Sprague, J.R., and Golly, A. (2005). *Best Behavior: Building Positive Behavior Support in Schools*. Frederick, CO: Sopris West Educational Services.
- Sprague, J.R., Sugai, G., and Walker, H. (1998). Antisocial Behavior in Schools. In T.S. Watson and F.M. Gresham (Eds.), *Handbook of Child Behavior Therapy* (pp. 451–474). New York: Plenum.
- Sprague, J., Walker, H., Golly, A., Myers, D., and Shannon, T. (2001). Translating Research Into Effective Practice: The Effects of a Universal Staff and Student Intervention on Indicators of Discipline and School Safety. *Education and Treatment of Children*, 24: 495–511.
- Sugai, G., and Horner, R. (1994). Including Students With Severe Behavior Problems in General Education Settings: Assumptions, Challenges, and Solutions. In J. Marr, G. Sugai, and G. Tindal (Eds.), *Oregon Conference Monograph, Vol. 6* (pp. 102–120). Eugene, OR: University of Oregon.
- Wilson, S.J., and Lipsey, M.W. (2005). *The Effectiveness of School-Based Violence Prevention Programs for Reducing Disruptive and Aggressive Behavior* (NCJ 211376). Rockville, MD: National Criminal Justice Reference Service. Retrieved June 7, 2008, from <http://www.ncjrs.gov/pdffiles1/nij/grants/211376.pdf>.